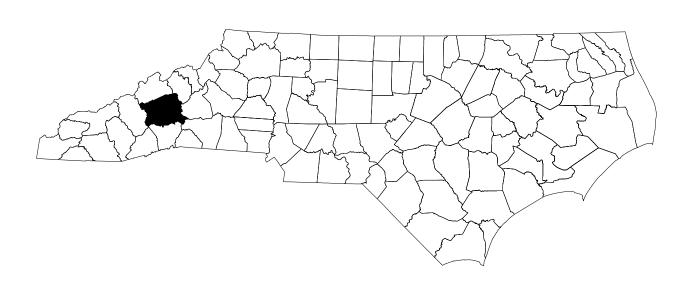
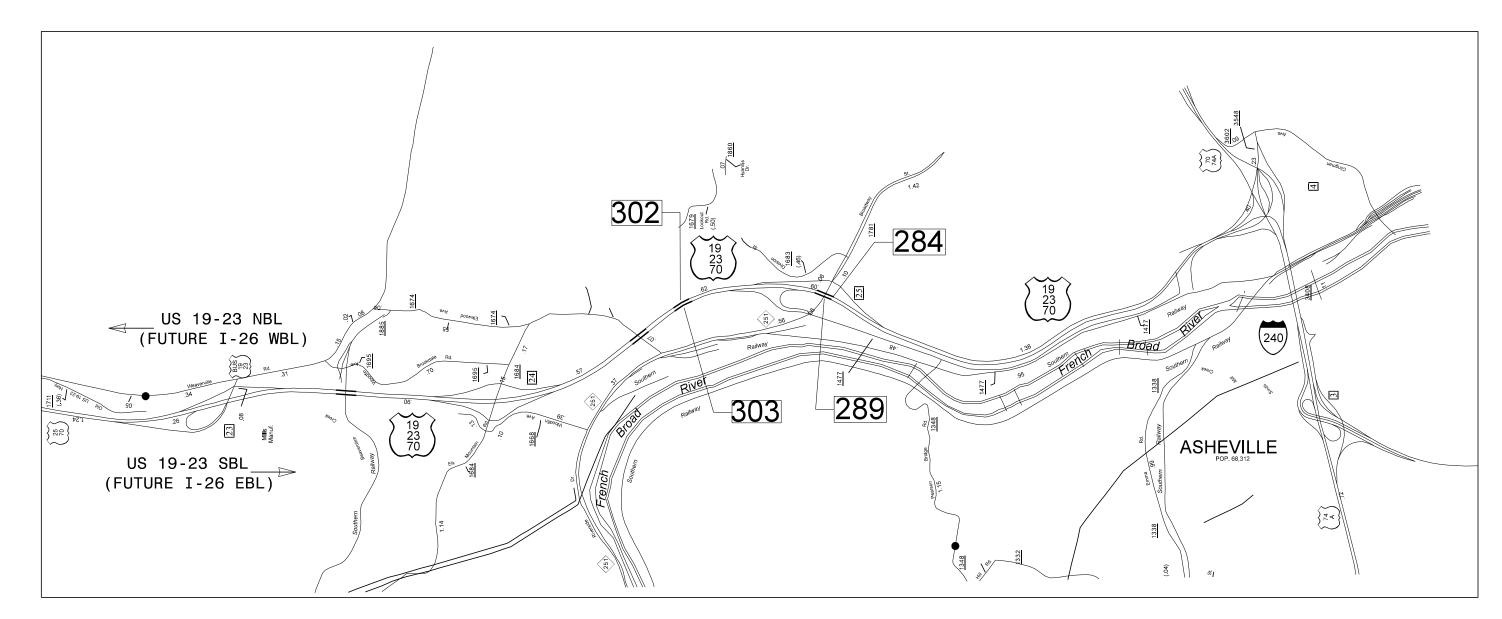
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BUNCOMBE COUNTY





LOCATION: BRIDGE #100284 ON US 19/23 OVER SR 1781 (BROADWAY ST.)

BRIDGE #100289 ON US 19/23 OVER SR 1781 (BROADWAY ST.)
BRIDGE #100302 ON US 19/23/70 OVER SR 1679 (LOOKOUT RD.)
BRIDGE #100303 ON US 19/23/70 OVER SR 1679 (LOOKOUT RD.)

TYPE OF WORK: BRIDGE PRESERVATION -LATEX MODIFIED CONCRETE-

EARLY STRENGTH (LMC-VES) OVERLAY, AND JOINT REPAIR.

WORK ZONE SAFETY & MOBILITY "from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

M. AKLILU

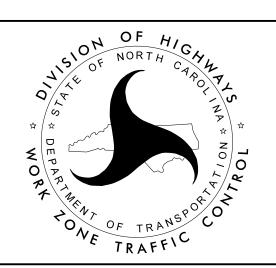
DON PARKER, P.E.

PROJECT ENGINEER

KARMEN DAIS, P.E.

PROJECT DESIGN ENGINEER

NCDOT CONTACTS:



INDEX OF SHEETS

SHEET NO.	TITLE		
TMP - 1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEET		
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND		
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)		
TMP-2	TEMPORARY TRAFFIC CONTROL NARRATIVE		
TMP-3	BRIDGE CROSS SECTIONS		
TMP-4	BRIDGE 289 ON-LOOP OFFSITE DETOUR		

3BPR.3.3

PROJECT:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED:

| Comparison of the second of the

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" -N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.

TITLE

1101.01	WORK ZONE WARNING SIGNS		
1101.02	TEMPORARY LANE CLOSURES		
1101.03	TEMPORARY ROAD CLOSURES		
1101.04	TEMPORARY SHOULDER CLOSURES		
1101.05	WORK ZONE VEHICLE ACCESSES		
1101.06	WARNING SIGNS FOR BLASTING ZONES		
1101.11	TRAFFIC CONTROL DESIGN TABLES		
1110.01	STATIONARY WORK ZONE SIGNS		
1110.02			
1115.01			
1130.01	DRUMS		
1135.01	CONES		
1145.01	BARRICADES		
1150.01	FLAGGING DEVICES		
1160.01	TEMPORARY CRASH CUSHION		
1165.01	TRUCK MOUNTED ATTENUATOR		
1170.01	PORTABLE CONCRETE BARRIER		
1180.01	SKINNY - DRUMS		
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS		
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS		
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS		
1205.04	PAVEMENT MARKINGS - INTERSECTIONS		
1205.05	PAVEMENT MARKINGS - TURN LANES		
1205.06	PAVEMENT MARKINGS - LANE DROPS		
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS		
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES		
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS		
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS		
1205.11			
1205.12			
1205.13			
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS		
1205.15			
1250.01			
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)		
1261.01			
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING		
1262.01			
1264.01			
1264.02	OBJECT MARKERS - INSTALLATION		

PROJ. REFERENCE NO. TMP-1A 13BPR.3.3

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

----- EXIST. PVMT.

─────── NORTH ARROW

PROPOSED PVMT.

TEMP. SHORING (LOCATION PURPOSES ONLY)

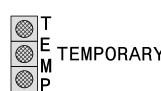
WORK AREA



SIGNALS

EXISTING







PAVEMENT MARKINGS

——EXISTING LINES ----TEMPORARY LINES

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM SKINNY DRUM O TUBULAR MARKER

TEMPORARY CRASH CUSHION

FLASHING ARROW BOARD FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

O PORTABLE SIGN

── STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

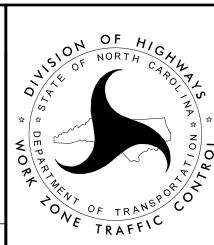
◆ YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

Don A. Parker DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED



ROADWAY STANDARD DRAWINGS & LEGEND

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:
ROLLING ROADBLOCK
LANE SHIFTS OR CLOSURES
SHOULDER CLOSURES
RAMP CLOSURES
NIGHT WORK
WORK HOUR RESTRICTIONS FOR PEAK TRAVEL
OFF-SITE DETOURS / USE OF ALTERNATIVE ROUTES

GENERAL NOTES / LOCAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

MONDAY - SUNDAY 6:00 AM - 7:00 PM

US 19-23

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

US 19-23

HOLIDAY

- 1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 7:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 PM THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 7:00 PM MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 7:00 PM TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY
THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE
INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER
INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.

- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 TUESDAY TO 7:00 P.M. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY
 BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 PM THE FOLLOWING
 TUESDAY AFTER THE WEEK OF CHRISTMAS.
- C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

US 19-23 RAMP

MONDAY - SUNDAY 6:00 AM - 7:00 PM

O) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
-) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON US 19-23.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

PROJ. REFERENCE NO. SHEET NO. 13BPR.3.3 TMP-1B

M) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.
 - PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- P) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.
 - COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

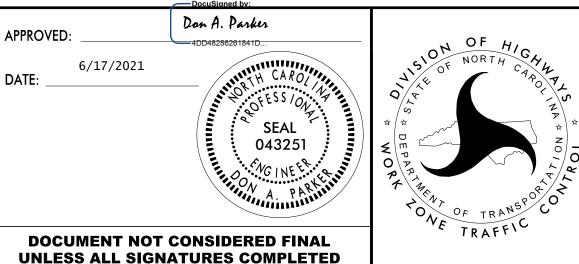
- R) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

V) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.



TRANSPORTATION
OPERATIONS
PLAN

PROJ. REFERENCE NO. SHEET NO. 13BPR.3.3 TMP-2

TEMPORARY TRAFFIC CONTROL NARRATIVE

BEFORE BEGINNING WORK AT ANY BRIDGE LOCATION, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONSTRUCTION SEQUENCE FOR TRAFFIC CONTROL AND CONSTRUCTION LIGHTING. THE SEQUENCE MUST BE APPROVED BEFORE CLOSING A LANE OF TRAFFIC.

THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER BEFORE WORKING IN MORE THAN ONE BRIDGE LOCATION SIMULTANEOUSLY.

REFER TO INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES FOR LANE AND/OR RAMP CLOSURE OPERATIONS.

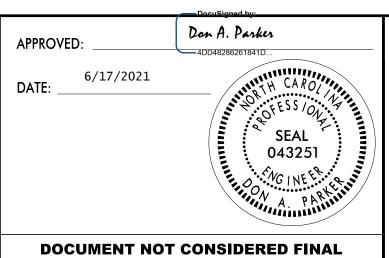
PRIOR TO BEGINNING WORK, INSTALL ADVANCE WARNING SIGNS IN ACCORDANCE WITH RSD 1101.01.

TEMPORARY TRAFFIC CONTROL NARRATIVE FOR BRIDGES 284, 302
AND 303

- 1. USING RSD 1101.02, SHEET 3, UTILIZE TEMPORARY LANE CLOSURES TO COMPLETE THE BRIDGE PRESERVATION PER THE STRUCTURES PLANS. REFER TO TMP-3 FOR STAGE I AND STAGE II TRAFFIC OPERATIONS.
- 2. REMOVE ALL TRAFFIC CONTROL DEVICES.

TEMPORARY TRAFFIC CONTROL NARRATIVE FOR BRIDGE 289

- 1. USING RSD 1101.02, SHEET 3, UTILIZE TEMPORARY LANE CLOSURES TO COMPLETE THE BRIDGE PRESERVATION PER THE STRUCTURES PLANS. REFER TO TMP-3 FOR STAGE I AND STAGE II TRAFFIC OPERATIONS.
 - A. CLOSE US-19/23 ON-RAMP FROM SR 1781 (BROADWAY STREET) DURING MAINLINE LANE CLOSURE OPERATIONS. REFER TO TMP-4 FOR ADDITIONAL DETAILS AND SIGN LOCATIONS FOR THE OFFSITE DETOUR.
- 2. REMOVE ALL TRAFFIC CONTROL DEVICES.

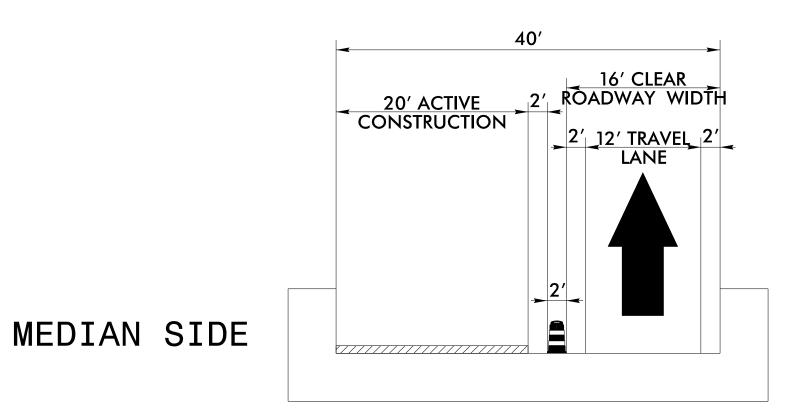


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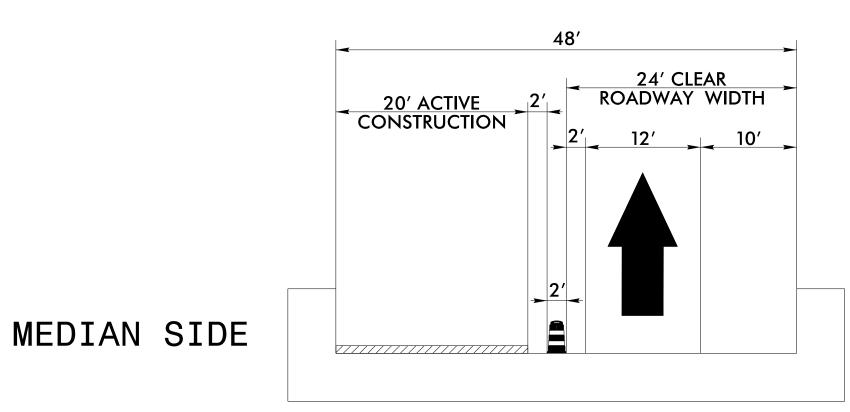


TEMPORARY
TRAFFIC CONTROL
NARRATIVE

TYPICAL SECTION FOR BRIDGE WORK

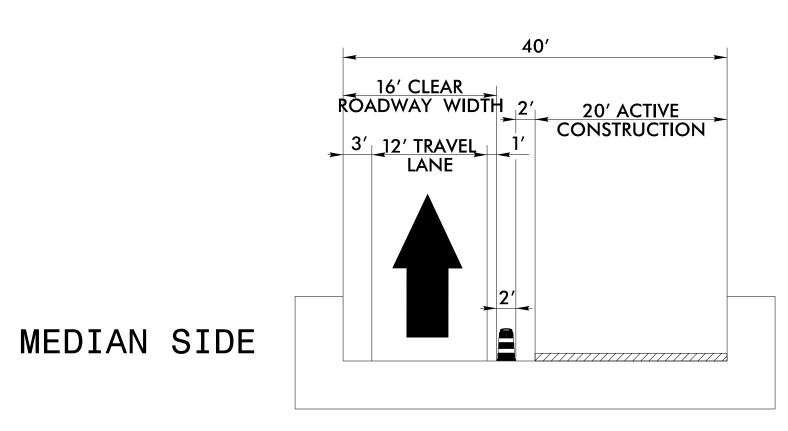


BRIDGES 284, 302, 303 STAGE I CONSTRUCTION

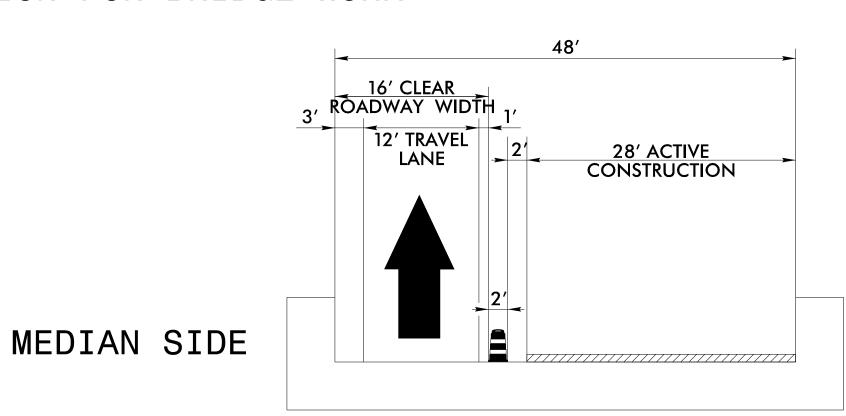


BRIDGE 289 STAGE I CONSTRUCTION

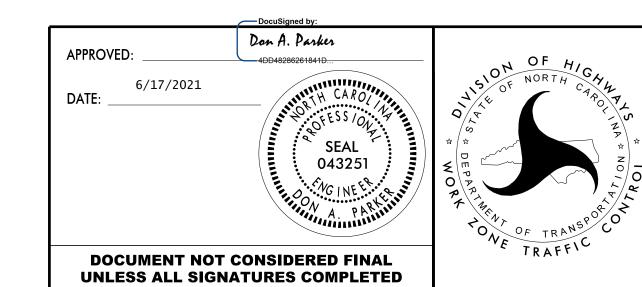
TYPICAL SECTION FOR BRIDGE WORK



BRIDGES 284, 302, 303 STAGE II CONSTRUCTION

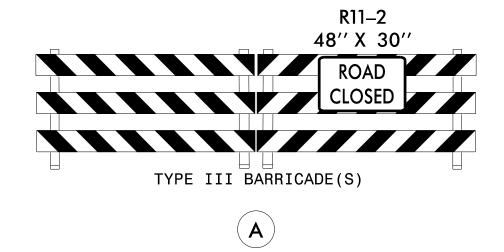


BRIDGE 289 STAGE II CONSTRUCTION



BRIDGE CROSS SECTIONS

PROJ. REFERENCE NO. TMP-4



NO ACCESS TO US 19/23 SOUTH FOLLOW DETOUR

B

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PROVIDED BY DIV 13

MESSAGE NO. 1	MESSAGE NO. 2		
19/23 S	USE		
ON-RAMP	DETOUR		
CLOSED			
CHANGEABLE MESSAGE SIGN			

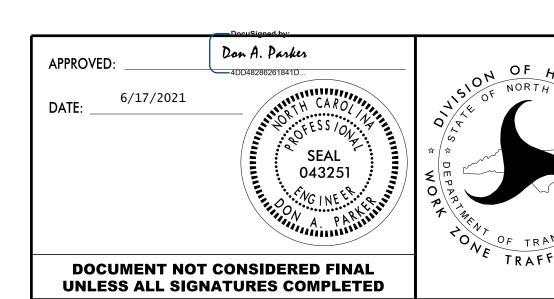
SOUTH M3-3 24" X 12"

30′′ X 24′′

M6–1 21′′ X 15′′

DETOUR | M4-8 24'' X 12'' SOUTH 30'' X 24''

DETOUR ROUTE



BRIDGE 289 ON-LOOP OFFSITE DETOUR

